

### **REMARKS**

The Applicant appreciates the thorough examination given this application by the Examiner.

### **Double Patenting**

The Examiner has determined that Applicant's claims 1, 2, 5, 8-12, and 14-17, conflict with claims 1-7 and 10 of Applicant's Application Serial No. 09/328,328 thus requiring elimination of the this application's claims as set forth by 37 C.F.R. 1.78(b). The Applicant has respectfully requested the Examiner to cancel theses claims, therefore eliminating them from this application as set forth by 37 C.F.R. 1.78(b).

### **Claim Rejection 35 U.S.C. § 112**

The Examiner has rejected claim 6 under 35 U.S.C. §112, first paragraph, as containing subject matter which not described in the specification in such a way as to enable one skilled in the art to which it pertains, or which it is most nearly connected, to make and/or use the invention. Claim 6 is dependent upon claim 4. In the original application, claim 4 was also dependent upon claim 3, which was dependent upon 2. Claim 2 said that the surfacer layer is composed of an epoxy and claim 6 says that the surfacer layer is a foam. A surfacer layer composed of both an epoxy and a foam is not supported in the specification.

However, Applicant has requested the Examiner to amend claim 4 to an independent form. The amended claim 4 does not address the composition of the surfacer layer, nor refers to a claim addressing the composition of the surfacer layer. Therefore, there is no longer a conflict in the composition of the surfacer layer. A surfacer layer composed of foam is supported in the specification. Accordingly, the Applicant respectfully traverses this rejection with respect to amended claim 6.

### **Claims Rejection 35 U.S.C. § 102**

The Examiner has rejected claims 1, 2, 5, 7-12, and 14-17, under 35 U.S.C. § 102(b), as being anticipated by Hume et al. (U.S. Patent No 5,618,616). The Applicant has respectfully requested the Examiner to cancel claims 1, 2, 5, 8-12, and 14-17, leaving claim 7 as the only claim rejected under section 102. The Applicant has respectfully requested the Examiner to amend claim 7. The amended claim 7 is now dependent on claim 6, which is dependent upon an independent claim 4. Claims 6 and 4 were not rejected under section 102, so the Applicant respectfully traverses this rejection with respect to amended claim 7.

### **Claims Rejection 35 U.S.C. § 103**

#### **1. As Being Anticipated Over Hume**

The Examiner has rejected claims 1, 2, 5, and 7-9, under 35 U.S.C. § 103, as being anticipated by Hume (U.S. Patent No. 5,618,616). The Applicant has respectfully requested the Examiner to cancel claims 1, 2, 5, 8-9, and 14-17, leaving claim 7 as the only claim rejected under section 103 as being unpatentable over Hume. The Applicant has respectfully requested the Examiner to amend claim 7. The amended claim 7 is now dependent on claim 6, which is dependent upon an independent claim 4. Claims 6 and 4 were not rejected under section 103 as being unpatentable over Hume, so the Applicant respectfully traverses this rejection with respect to amended claim 7.

#### **2. As Being Unpatentable Over Hume In View of Grinshpun**

The Examiner has rejected claims 3, 4, and 13, under 35 U.S.C. § 103, as being anticipated by Hume (U.S. Patent No. 5,618,616) in view of Grinshpun (U.S. Patent No. 5,995,013). The Examiner relied upon Hume to teach a liner for rehabilitating or repairing waste water system components. Grinshpun was relied upon to show that combining a polyurea foam layer with an epoxy resin layer results in structures with improved insulating properties. The Applicant respectfully traverses Examiner's obviousness rejection as being unpatentable over Hume in view of Grinshpun by filing a terminal disclaimer. By filing a terminal disclaimer with respect to the teachings of the Hume patent, in order for Applicant's claims to be rejected, claims 3, 4, and 13 would have to be obvious when looking at only the GRINSHPUN patent.

Claims 3, 4, and 13 are not obvious in light of the teachings from the Grinshpun patent. First, in order for the claims to be unpatentable, the teachings of Grinshpun must make Applicant's advancement in the art an obvious step by one of ordinary skill in the pertinent art. The pertinent art for Applicant's invention is the rehabilitation or repair of waste water system components such as manholes, sewer pipes, lift stations or clarifiers. The Grinshpun method is described as being useful for producing structural members having insulating properties. Grinshpun (19 : 21). A person having ordinary skill in the art of manhole repair and rehabilitation would not have knowledge of the method of Grinshpun for making support members with insulating properties by using a carrier/mold that either passes over a foam spraying system or is stationary with a foam sprayer passing through the carrier. Accordingly, claims 3,4, and 13 are not obvious under Grinshpun because the two fields of art are not close enough for a person in the field of repairing waste water systems to know of the teachings of the Grinshpun patent.

Furthermore, even if the fields of art were close enough for those skilled in the art of waste water system repair and rehabilitation to know of the Grinshpun patent, the advancements over Grinshpun are not obvious. The Grinshpun patent is a method for making foam-containing structures having a foamed resin core and a solid resin outer layer that is formed by using a defoamer. Grinshpun (1 : 14-19). In every embodiment in the Grinshpun disclosure, a defoamer is used to form the outer surface layer, and a defoamer is used for adhesion at the interface between the materials in embodiments with layers of different materials. The liners in claims 3, 4, and 13 do not use a defoamer. Those skilled in the art of waste water system repair and rehabilitation must consider the adhesive qualities of the liner to the substrate being lined, the adhesive qualities of the layers to each other, the structural integrity of the layers and whether the liner will add support for the substrate being lined, the ability of the liner to prevent current cracks in the substrate to propagate further, and the ability of the liner to prevent leakage of the waste water past the liner to the substrate. It would not be obvious to one skilled in the art of waste water facility repairs and rehabilitation to remove an element (the defoamer) of the Grinshpun patent that not only is necessary to form outer surfaces, but is also necessary at interfaces of the different materials. Therefore, claims 3, 4, and 13 are not obvious in light of the teachings of the Grinshpun patent.

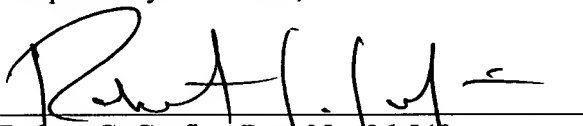
Applicant respectfully traverses the rejection of claims 3, 4, and 13 as being unpatentable under 103 because the teachings of the Grinshpun patent would not make claims 3, 4, and 13

obvious to one skilled in the pertinent art of waste water system repair and rehabilitation since the two arts are so unrelated to each other. Applicant also respectfully traverses the rejection of claims 3, 4, and 13 as being unpatentable under 103 in light of Grinshpun because removing an element that is necessary in every embodiment would not be an obvious next step to one skilled in the pertinent art of waste water system repair and rehabilitation.

### SUMMARY

In summary, for reasons detailed above, it is submitted that all claims now present in the application are allowable. Accordingly, allowance of all claims is submitted to be in order. Such action is respectfully requested. The Commissioner is hereby authorized to charge or credit any fees to Deposit Account 50-0259.


Respectfully submitted,



Robert C. Curfiss, Reg. No. 26,540  
BRACEWELL & PATTERSON, L.L.P.  
711 Louisiana, Suite 2900  
Houston, Texas 77002  
713/221-1430  
Fax 713/221-2113

### CERTIFICATE UNDER 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, Washington, D.C., on ~~August~~ <sup>December</sup> 21, 2001.

  
Chris Northcutt

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application

JAMES M.. HUME

Filed: March 22, 2000

Serial No.: 09/532,400

For: LINER FOR WASTE WATER  
SYSTEM REHABILITATION



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Art Unit: 1771

Primary Examiner: Roche, L.

Attorney Docket No.: 42914.0020

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**VERSION OF AMENDMENT SHOWING CHANGES MADE**

In accordance with the recent amendments to 37 C.F.R. § 1.121, Applicant is providing clean versions of those claims that have been amended within this response. Marked-up copies of these claims are attached.

**In the Claims:**

Please amend the claims as follows:

3. [The liner of claim 2, where, ] A bi-layer liner for lining concrete structures comprising: a surfacer layer and a barrier layer, said barrier layer being disposed on said surfacer layer, said barrier layer is a foam.
4. [The liner of claim 3, where said foam] A bi-layer liner for lining concrete structures comprising: a surfacer layer and a barrier layer, said barrier layer being disposed on said surfacer layer, said barrier layer is a polyurea foam.
7. The liner of claim 6[1], where said foam is a polyurethane foam.

13. [The liner of claim 11, wherein said foam is] A multi-layer liner for lining concrete structures comprising:

a first barrier layer;

a surfacer layer disposed on said first barrier layer, said surfacer layer being a polyurea foam[.]; and

a second barrier layer disposed on said surfacer layer.